

**Alberi, Kirstin M.**, National Renewable Energy Laboratory, Golden, CO, “Light-Stimulated Epitaxy of Novel Semiconductor Alloys and Heterostructures,” selected by the Office of Basic Energy Sciences.

**Asbury, John B.**, Pennsylvania State University, University Park, PA, “Molecular and Structural Probes of Defect States in Quantum Dot Photovoltaics,” selected by the Office of Basic Energy Sciences.

**Balaji, Pavan**, Argonne National Laboratory, Argonne, IL, “Exploring Efficient Data Movement Strategies for Exascale Systems with Deep Memory Hierarchies,” selected by the Office of Advanced Scientific Computing Research.

**Berezovsky, Jesse**, Case Western Reserve University, Cleveland, OH, “Mapping Interactions in Hybrid Systems with Active Scanning Probes,” selected by the Office of Basic Energy Sciences.

**Betley, Theodore A.**, Harvard University, Cambridge, MA, “Catalyst Design for Small Molecule Activation of Energy Consequence,” selected by the Office of Basic Energy Sciences.

**Bhan, Aditya**, University of Minnesota, Minneapolis, MN, “One-Pot Catalytic Conversion of Biomass and Alkanes: Kinetically Coupling Deoxygenation and Dehydrogenation Pathways,” selected by the Office of Basic Energy Sciences.

**Bonfils, Céline**, Lawrence Livermore National Laboratory, Livermore, CA, “Detection and Attribution of Regional Climate Change with a Focus on the Precursors of Droughts,” selected by the Office of Biological and Environmental Research.

**Buchanan, Kristen S.**, Colorado State University, Fort Collins, CO, “Spin Wave Interactions in Metallic Ferromagnets,” selected by the Office of Basic Energy Sciences.

**Carosi, Gianpaolo**, Lawrence Livermore National Laboratory, Livermore, CA, “Searching for Dark Matter Axions with New High-Frequency Tunable Microwave Cavities,” selected by the Office of High Energy Physics.

**Casey, Brendan**, Fermi National Accelerator Laboratory, Batavia, IL, “Tracking for the New Muon g-2 Experiment,” selected by the Office of High Energy Physics.

**Chen, Wei-Ren**, Oak Ridge National Laboratory, Oak Ridge, TN, “Multiphasic Soft Colloids: From Fundamentals to Application of Energy Sustainability,” selected by the Office of Basic Energy Sciences.

**Childs, Hank**, Lawrence Berkeley National Laboratory, Berkeley, CA, “Data Exploration at the Exascale,” selected by the Office of Advanced Scientific Computing Research.

**Clarke, Amy**, Los Alamos National Laboratory, Los Alamos, NM, “In-situ Monitoring of Dynamic Phenomena During Solidification,” selected by the Office of Basic Energy Sciences.

**Commaux, Nicolas**, Oak Ridge National Laboratory, Oak Ridge, TN, “Development and Characterization of Improved Disruption and Runaway Electron Mitigation Systems,” selected by the Office of Fusion Energy Sciences.

**Covrig, Silviu D.**, Thomas Jefferson National Accelerator Facility, Newport News, VA, “Computational Fluid Dynamics Facility to Support Targets for the 12 GeV Program at Jefferson Laboratory,” selected by the Office of Nuclear Physics.

**Crawford, Christopher**, University of Kentucky, Lexington, KY, “Precision Measurements with Low Energy Neutrons,” selected by the Office of Nuclear Physics.

**Donev, Aleksandar**, New York University, New York, NY, “Stochastic Simulation of Complex Fluid Flows,” selected by the Office of Advanced Scientific Computing Research.

**Doublerly, Gary E.**, University of Georgia, Athens, GA, “Vibrational Spectroscopy of Transient Combustion Intermediates Trapped in Helium Nanodroplets,” selected by the Office of Basic Energy Sciences.

**Duan, Xiangfeng**, University of California, Los Angeles, Los Angeles, CA, “Rational Design and Nanoscale Integration of Multi-Heterostructures as Highly Efficient Photocatalysts,” selected by the Office of Basic Energy Sciences.

**Duan, Huaiyu**, University of New Mexico, Albuquerque, NM, “Neutrino Oscillations in Supernovae,” selected by the Office of Nuclear Physics and the DOE Experimental Program to Stimulate Competitive Research.

**Dueber, John E.**, University of California, Berkeley, Berkeley, CA, “Repurposing the *Saccharomyces Cerevisiae* Peroxisome for Compartmentalizing Multi-Enzyme Pathways,” selected by the Office of Biological and Environmental Research.

**Erez, Mattan**, University of Texas, Austin, TX, “Containment Domains: Programming and Execution Model Support for Resiliency,” selected by the Office of Advanced Scientific Computing Research.

**Essig, Rouven**, Stony Brook University, Stony Brook, NY, “Particle Physics at the Cosmic, Intensity, and Energy Frontiers,” selected by the Office of High Energy Physics.

**Figueroa, Joshua S.**, University of California, San Diego, La Jolla, CA, “Bond Formation and Catalysis by Base-metal Unsaturated Isocyanides,” selected by the Office of Basic Energy Sciences.

**Folden III, Charles M.**, Texas A&M University, College Station, TX, “Providing the Roadmap for New Element Discoveries and New Chemistries of the Heaviest Elements,” selected by the Office of Nuclear Physics.

**Gessner, Oliver**, Lawrence Berkeley National Laboratory, Berkeley, CA, “Ultrafast X-ray Studies of Intramolecular and Interfacial Charge Migration,” selected by the Office of Basic Energy Sciences.

**Gianola, Daniel S.**, University of Pennsylvania, Philadelphia, PA, “Modulating Thermal Transport Phenomena in Nanostructures via Elastic Strain at Extreme Limits of Strength,” selected by the Office of Basic Energy Sciences.

**Hartnoll, Sean** , Stanford University, Palo Alto, CA, “Holography, Gravity and Condensed Matter,” selected by the Office of High Energy Physics.

**Hayes, Daniel J.**, Oak Ridge National Laboratory, Oak Ridge, TN, “Model-Data Fusion Approaches for Retrospective and Predictive Assessment of the Pan-Arctic Scale Permafrost Carbon Feedback to Global Climate,” selected by the Office of Biological and Environmental Research.

**Jones, Anne K.**, Arizona State University, Tempe, AZ, “Utilization of Protein Film Electrochemistry to Characterize the Mechanisms Imparting Aerotolerance and Bidirectionality in Soluble, Multimeric [NiFe]-Hydrogenases,” selected by the Office of Basic Energy Sciences.

**Karnik, Rohit** , Massachusetts Institute of Technology, Cambridge, MA, “Graphene Membranes with Tunable Nanometer-Scale Pores,” selected by the Office of Basic Energy Sciences.

**Kasen, Daniel** , University of California, Berkeley, Berkeley, CA, “Modeling Astrophysical Explosions and the Nucleosynthesis of the Heavy Elements,” selected by the Office of Nuclear Physics.

**Kemp, Andreas J.**, Lawrence Livermore National Laboratory, Livermore, CA, “Large-Scale Modeling of Intense Short-Pulse Laser Interaction for HEDLP,” selected by the Office of Fusion Energy Sciences.

**Kilina, Svetlana** , North Dakota State University, Fargo, ND, “Modeling of Photoexcited Process at Interfaces of Functionalized Quantum Dots,” selected by the Office of Basic Energy Sciences and the DOE Experimental Program to Stimulate Competitive Research.

**Kling, Matthias** , Kansas State University, Manhattan, KS, “Electron Dynamics in Nanostructures in Strong Laser Fields,” selected by the Office of Basic Energy Sciences and the DOE Experimental Program to Stimulate Competitive Research.

**Li, Lu** , University of Michigan, Ann Arbor, MI, “Probing High Temperature Superconductors with Magnetometry in Ultrahigh Magnetic Fields,” selected by the Office of Basic Energy Sciences.

**Mandelbaum, Rachel** , Carnegie Mellon University, Pittsburgh, PA, “Optimal Cosmological Measurements with Weak Gravitational Lensing,” selected by the Office of High Energy Physics.

**Marian, Jaime** , Lawrence Livermore National Laboratory, Livermore, CA, “Computational Modeling and Design of Radiation-Tolerant Materials for Fusion,” selected by the Office of Fusion Energy Sciences.

**McKinlay, James B.**, Indiana University, Bloomington, IN, “Metabolism and Evolution of a Biofuel-Producing Microbial Coculture,” selected by the Office of Biological and Environmental Research.

**Padmanabhan, Nikhil** , Yale University, New Haven, CT, “A Ruler To Measure The Universe: Probing Dark Energy with Baryon Acoustic Oscillations,” selected by the Office of High Energy Physics.

**Pain, Steven D.**, Oak Ridge National Laboratory, Oak Ridge, TN, “Nuclear Physics on the Road to FRIB: Enhancing Direct-Reaction Measurements Through High-Resolution Coincidence Experiments,” selected by the Office of Nuclear Physics.

**Parra Diaz, Felix** , Massachusetts Institute of Technology, Cambridge, MA, “Spontaneous Generation of Rotation in Tokamak Plasmas,” selected by the Office of Fusion Energy Sciences.

**Payne, Samuel H.**, Pacific Northwest National Laboratory, Richland, WA, “Improved Sensitivity and Utility of Metaproteomics Analyses,” selected by the Office of Biological and Environmental Research.

**Reed, Jennifer L.**, University of Wisconsin, Madison, WI, “Systems Approach to Engineering Cyanobacteria for Biofuel Production,” selected by the Office of Biological and Environmental Research.

**Romatschke, Paul** , University of Colorado, Boulder, CO, “Early Time Dynamics in Heavy-Ion Collisions,” selected by the Office of Nuclear Physics.

**Rose, Volker** , Argonne National Laboratory, Argonne, IL, “Combining Scanning Probe Microscopy and Synchrotron Radiation for Nanoscale Imaging with Chemical, Electronic and Magnetic Contrast,” selected by the Office of Basic Energy Sciences.

**Sahin, Ozgur** , Columbia University, New York, NY, “Assembling Microorganisms into Energy Converting Materials,” selected by the Office of Basic Energy Sciences.

**Salguero, Tina** , University of Georgia, Athens, GA, “Dielectric Ceramics in Nanosheet Form,” selected by the Office of Basic Energy Sciences.

**Senatore, Leonardo** , Stanford University, Palo Alto, CA, “From Cosmological Observations to Fundamental Interactions,” selected by the Office of High Energy Physics.

**Shen, Tengming** , Fermi National Accelerator Laboratory, Batavia, IL, “Engineering High Field Superconducting Materials for Frontier Accelerator Technology,” selected by the Office of High Energy Physics.

**Snopok, Pavel** , Illinois Institute of Technology, Chicago, IL, “Advanced Simulation Tools for Muon-Based Accelerators,” selected by the Office of High Energy Physics.

**Solares, Santiago D.**, University of Maryland, College Park, MD, “Trimodal Tapping Mode Atomic Force Microscopy: Simultaneous 4D Mapping of Conservative and Dissipative Probe-Sample Interactions of Energy-Relevant Materials,” selected by the Office of Basic Energy Sciences.

**Suen, Garrett** , University of Wisconsin, Madison, WI, “Deciphering the Genetic and Molecular Underpinnings of Carbohydrate-Degrading Systems in Ruminant Bacteria,” selected by the Office of Biological and Environmental Research.

**Taheri, Mitra** , Drexel University, Philadelphia, PA, “Linking the Codependence of Grain Boundary Structure and Density to Defect Evolution Mechanisms During Radiation Damage,” selected by the Office of Basic Energy Sciences.

**Vitev, Ivan** , Los Alamos National Laboratory, Los Alamos, NM, “Jet Probes of a New State of Matter,” selected by the Office of Nuclear Physics.

**Waisman, Haim** , Columbia University, New York, NY, “Regularized Finite Element Formulations for Shear Band Instabilities in Metals,” selected by the Office of Advanced Scientific Computing Research.

**Whitehead, Lisa** , University of Houston, Houston, TX, “Precision Measurement of Electron Antineutrino Disappearance in the Daya Bay Experiment,” selected by the Office of High Energy Physics.

**Wilson, Richard E.**, Argonne National Laboratory, Argonne, IL, “Periodicity and the Role of the 5f-Electrons at Protactinium,” selected by the Office of Basic Energy Sciences.

**Wilson, Kevin R.**, Lawrence Berkeley National Laboratory, Berkeley, CA, “Free Radical Reactions of Hydrocarbons at Aqueous Interfaces,” selected by the Office of Basic Energy Sciences.

**Wu, Weida** , Rutgers University, New Brunswick, NJ, “In Situ Scanning Force Microscopy Studies of Cross-coupled Domains and Domain Walls,” selected by the Office of Basic Energy Sciences.

**Xiang, Dao** , SLAC National Accelerator Laboratory, Menlo Park, CA, “Advanced Seeding, Beam Manipulation and Beam Diagnostic Techniques for Next Generation X-ray Free Electron Lasers,” selected by the Office of Basic Energy Sciences.

**Xu, Xiaodong** , University of Washington, Seattle, WA, “Photon-Electron Interactions in Dirac Quantum Materials,” selected by the Office of Basic Energy Sciences.

**Ye, Ming** , Florida State University, Tallahassee, FL, “Computational Bayesian Framework for Quantification and Reduction of Predictive Uncertainty in Groundwater Reactive Transport Modeling,” selected by the Office of Biological and Environmental Research.

**Young, Jamey D.**, Vanderbilt University, Nashville, TN, “Enhancing Metabolic Flux to Photosynthetic Biofuels,” selected by the Office of Biological and Environmental Research and the DOE Experimental Program to Stimulate Competitive Research.

**Zavala, Victor M.**, Argonne National Laboratory, Argonne, IL, “Next-Generation Optimization under Uncertainty: Structure-Oriented Algorithms,” selected by the Office of Advanced Scientific Computing Research.

**Zeller, Geralyn (Sam)** , Fermi National Accelerator Laboratory, Batavia, IL, “Understanding Liquid Argon Neutrino Detectors: Moving from Art to Science,” selected by the Office of High Energy Physics.

**Zhu, Junjie** , University of Michigan, Ann Arbor, MI, “Search for New Physics and Upgrade of the Muon Spectrometer at ATLAS,” selected by the Office of High Energy Physics.

**Zide, Joshua M.O.**, University of Delaware, Newark, DE, “Growth and Properties of New Epitaxial Metal/Semiconductor Nanocomposites,” selected by the Office of Basic Energy Sciences and the DOE Experimental Program to Stimulate Competitive Research.